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(54) BUILDING BLOCK
(71) SOIL FILTERS AUSTRALIA PTY. LTD.
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(43) 3.9.81
(51)³ E04C 1/00 E02B 3/14
(72) SAMUEL ALFRED LANT
(74) SA
(55) 13150-66 406387 E02B 3/14
US 3324619
(57) Claim 000

• E02D17/20

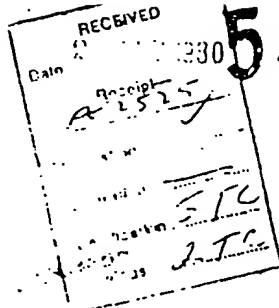
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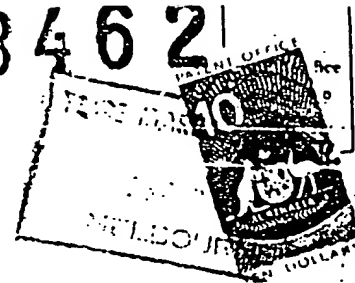
(44) 12.12.85

1. A concrete block of generally elongate cuboidal shape having on two respective parallel faces thereof projections and recesses capable of matingly engaging with the recesses and projections of other such blocks, wherein the projections and recesses are dimensioned such as to permit substantial movement of two such blocks with respect to one another in the direction of the elongation of each block, when in such mating engagement.

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548462



COMMONWEALTH OF AUSTRALIA

Form 1

Patents Act 1952-1973

67477/81

APPLICATION FOR A PATENT

IX
WF

SOIL FILTERS AUSTRALIA PTY. LTD.
(Use BLOCK letters)

COMPLETE AFTER PROVISIONAL SPECIFICATION No. 67477/81

of 1 Greenaway Street, Bulleen, 3105, Victoria, Australia.

hereby apply for the grant of a Patent for an invention entitled... "BLOCKS"

which is described in the accompanying provisional ~~complete~~ specification.

My address for service is... SANDERCOCK, SMITH & BEADLE, of 203, Riversdale
Our Road, (P.O. Box 410), Hawthorn, 3122, Victoria, Australia.

Dated this 22nd day of FEBRUARY, 1980.

To:

THE COMMISSIONER OF PATENTS

BY:

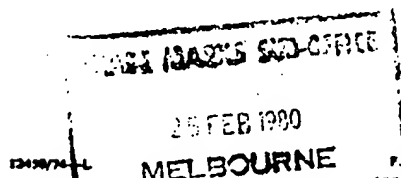
SOIL FILTERS AUSTRALIA PTY. LTD.

Handwritten signature

(Signature)

SANDERCOCK, SMITH & BEADLE

This form must be accompanied by either a provisional specification (Form 9 and true copy) or by a complete specification (Form 10 and true copy).



P.O. ATTERSON, Government Printer, Canberra

**PATENT DECLARATION FORM
(CONVENTION OR NON-CONVENTION)**

DECLARATION IN SUPPORT OF APPLICATION FOR A PATENT

In support of the application made by SOIL FILTERS AUSTRALIA PTY. LTD.
for a patent for an invention entitled "BLOCKS"

by Samuel Alfred Cant of 1 Greenaway Street,
Bulleen, 3105, Victoria, Australia

do solemnly and sincerely declare as follows:

- ~~XXXXXXX~~
OR (b) I am authorized by the abovementioned applicant to make this declaration on its behalf.
~~XXXXXXX~~
OR (b) _____

Samuel Alfred Cant of 1 Greenaway Street,
BULLEEN 3105, Victoria, Australia

is/are the actual inventor(s) of the invention and the facts upon which the applicant(s) is/are entitled to make the application are as follows:-

The said Soil Filters Australia Pty. Ltd., would be
entitled to have assigned to it a patent granted upon
an application made by the said inventor in respect of
the said invention.

3. The basic application(s) as defined by Section 141 of the Act was/were made in the following country or countries on the following date(s) by the following applicant(s)
- | | | |
|----------|----------|----------|
| in _____ | on _____ | 19 _____ |
| by _____ | | |
| in _____ | on _____ | 19 _____ |
| by _____ | | |
| in _____ | on _____ | 19 _____ |
| by _____ | | |
| in _____ | on _____ | 19 _____ |
| by _____ | | |

4. The basic application(s) referred to in paragraph 3 of this Declaration was/were the first application(s) made in a Convention country in respect of the invention the subject of the application.

and date of
iss.

Declared at _____ this 25TH day of OCTOBER 1980

NO ATTESTATION
OR SEAL

To: The Commissioner of Patents,
Australia

Signature(s) of declarant(s).



COMPLET

(ORIGINAL)

FOR OFFICE USE
67477/81

Class:

Int. Cl.

Application Number:

Lodged:

Complete Specification—Lodged:

Accepted:

Published:

Priority:

Related Art

TO BE COMPLETED BY APPLICANT

Name of Applicant: SOIL FILTERS AUSTRALIA PTY. LTD.

Address of Applicant: 1 Greenaway Street, Bulleen, 3105,
Victoria, Australia.

Actual Inventor: SAMUEL
SAMUEL ALFRED CANT

Address for Service: SANDERCOCK, SMITH & BEADLE,
203 Riversdale Road, (P.O. Box 410)
HAWTHORN VIC 3122.

Complete Specification for the invention entitled: "BLOCKS"

The following statement is a full description of this invention, including the best method of performing it known to me:—

Notes: The description is to be typed in double spacing, plus type face, in an area not exceeding 250 mm in depth and 180 mm in width, on tough white paper of good quality and it is to be inserted in this form.

This invention relates to blocks.

In a particular aspect this invention relates to concrete blocks which can be used to line waterways such as spillways, drains, culverts, channels and can be used on embankments such as river embankments and on seashore. Such blocks can protect the underlying substrate from water erosion or be useful as ramps such as boat ramps.

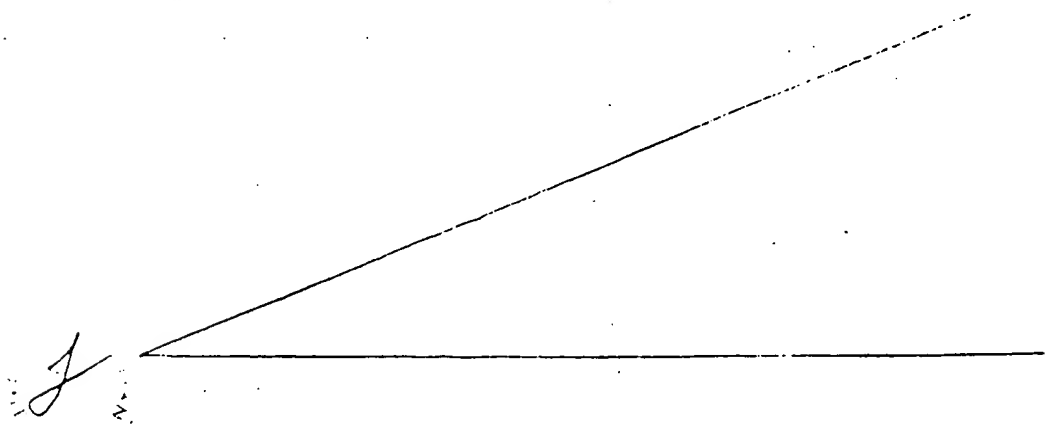
In the specification of Australian patent application no. AU-A-67476/81, certain blocks and mats have been described. However, the mat described therein has limited flexibility. In some instances that limited flexibility is very desirable but in other instances greater flexibility is required.

Accordingly, in one aspect this invention relates to blocks and mates which enable certain flexing.

The present invention provides a concrete block of generally elongate cuboidal shape having on two respective parallel faces thereof projections and recesses capable of matingly engaging with the recesses and projections of other such blocks, wherein the projections and recesses are dimensioned such as to permit substantial movement of two such blocks with respect to one another in the direction of the elongation of each block, when in such mating engagement.

Preferably, there are two such projections on one of said faces and two such recesses on the other of said faces.

Preferably each such projection is of frusto-conical shape with the widest part thereof adjacent the respective one of said faces, the recesses are preferably



elongate laterally of the block.

In a preferred aspect the recesses are oval shaped
~~in cross-section.~~

5 The blocks may have spacers to space them a
predetermined distance apart.

Preferably the block has at least one aperture
extending through and between said faces to enable cable
or rod to be passed therethrough to interconnect a number
of such blocks when in staggered relation with such
10 projections of one block engaged with such recesses of
two other such blocks.

Preferably, two edges of the block are
chamfered. If those chamfered edges are presented to moving
water they will interrupt flow whereas if they are placed
15 down they will not interrupt flow to the same extent.

The block can be conveniently made by casting.

Large mats can be made up from the blocks and
those mats can be laid where required. The projections
and recesses will allow flexing of the mats about the
20 axes of the projections and recesses but will restrict
flexing of the mats transverse to those axes. Thus,
differential settlement of the blocks at the interface
between two blocks should be restricted.

The present invention will now be illustrated
25 with reference to the accompanying drawings in which:

Figure 1 is one perspective view of a block,

Figure 2 is another perspective view of the
block, and

Figure 3 is a plan view of a mat of blocks.

The block shown in Figures 1 and 2 is generally rectangular in form and has rectangular faces 1, 2, 3, 4, 5 and 6. Faces 5 and 6 are inclined faces. In addition, the block has two parallel and opposite faces 7 and 8.

5 Face 7 has two frusto-conical projections 9 and 10 thereon and face 8 has two recesses 11 and 12 therein. The recesses are oval shaped in cross-section.

The block also has spacers 31 and 32 to space the block a predetermined distance from another such block.

10 In use, a mat of such blocks can be formed by engaging the projections 9 and 10 of one block in the recesses 12 and 11 of two other blocks, by engaging the projections 10 and 9 of two further blocks in the recesses 11 and 12 of said one block and by repeating the above
15 with further blocks.

If desired cables or rods 16 may be passed through the holes 15 to stabilize the mat.

The mat so formed will have many uses such as in paving and road making but will find particular application
20 in lining waterways and on embankments.

It is particularly to be noted that the inter-engagement of the blocks will allow flexing of the mat about the axes 21 and 22. Further, lateral movement in the direction of arrow 25 will be permitted due to the shape of
25 the recesses 11 and 12. Further, some flexing, although limited, will be possible about axes 23 and 24.

The fact that the projections 9 and 10 are able to move in the recesses 11 and 12 will enable mats to

conform to complex curves better than Applicant's previously proposed blocks. (2)

~~Modifications and adaptations may be made to the~~
above described without departing from the spirit and scope
5 of this invention which includes every novel feature and
~~combination of features disclosed herein.~~

The claims form part of the disclosure of this specification.

The claims defining the invention are as follows:

1. A concrete block of generally elongate cuboidal shape having on two respective parallel faces thereof projections and recesses capable of matingly engaging with the recesses and projections of other such blocks, wherein the projections and recesses are dimensioned such as to permit substantial movement of two such blocks with respect to one another in the direction of the elongation of each block, when in such mating engagement.
2. A concrete block as claimed in claim 1, wherein there are two such projections on one of said faces and two such recesses on the other of said faces.
3. A concrete block as claimed in claim 1 or claim 2, wherein each such projection is of frusto-conical shape with the widest part thereof adjacent the respective one of said faces.
4. A concrete block as claimed in any preceding claim, wherein the recesses are elongate.
5. A concrete block as claimed in any preceding claim, wherein the recesses are oval shaped.
6. A concrete block as claimed in any preceding claim, wherein the block has a spacer to space two such blocks a predetermined distance apart when in such mating engagement.
7. A concrete block as claimed in any preceding claim, including at least one aperture extending through and between said faces to enable cable or rod to be passed therethrough to interconnect a number of such blocks when in staggered relation with such projections of one block engaged with such recesses of two other such blocks.
8. A concrete block as claimed in any preceding claim wherein two edges of the block are chamfered.
9. A concrete block substantially as hereinbefore described with reference to Figures 1 and 2 of the accompanying drawings.
10. A mat formed from a plurality of blocks as claimed in any preceding claim.

11. A mat substantially as herein described with reference to the accompanying drawings.

DATED THIS 15TH DAY OF OCTOBER 1985

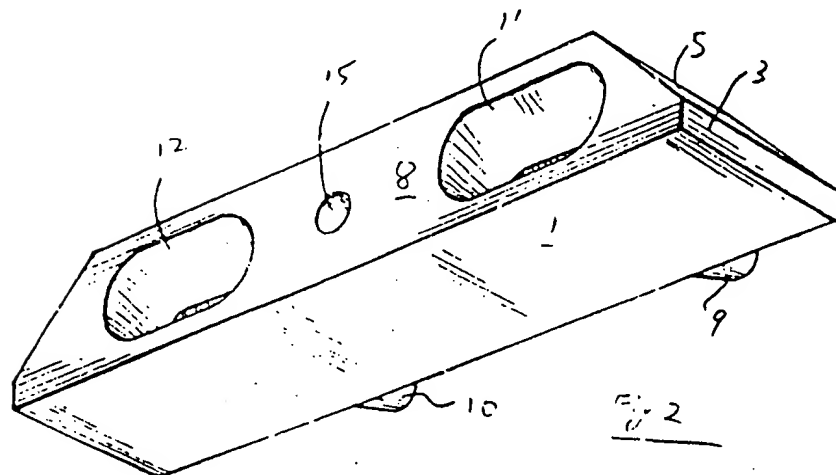
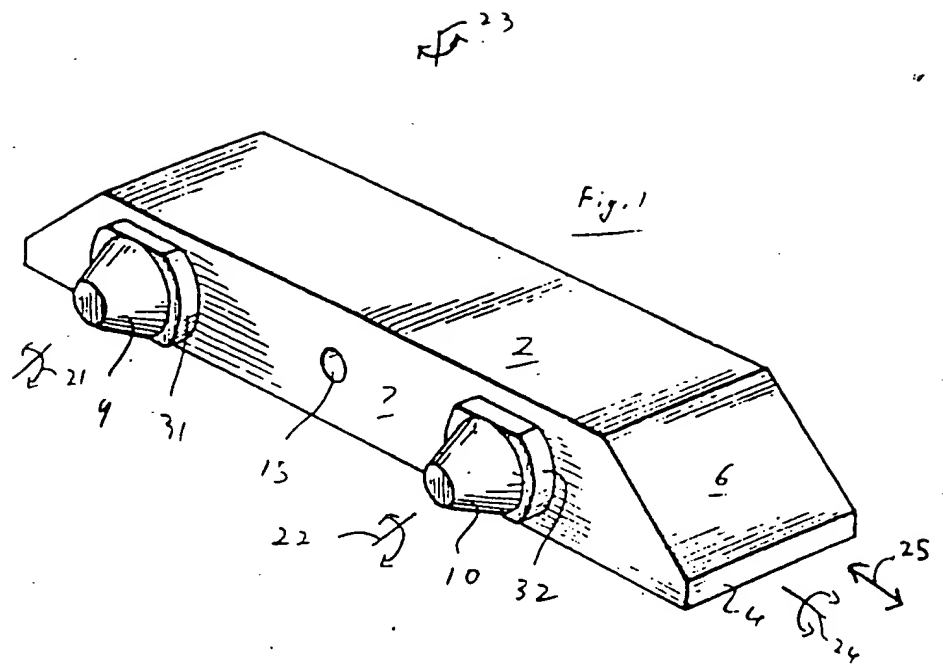
SOIL FILTERS AUSTRALIA PTY. LTD.

By its Patent Attorneys:

SANDERCOCK, SMITH & BEADLE

Fellows Institute of Patent
Attorneys of Australia





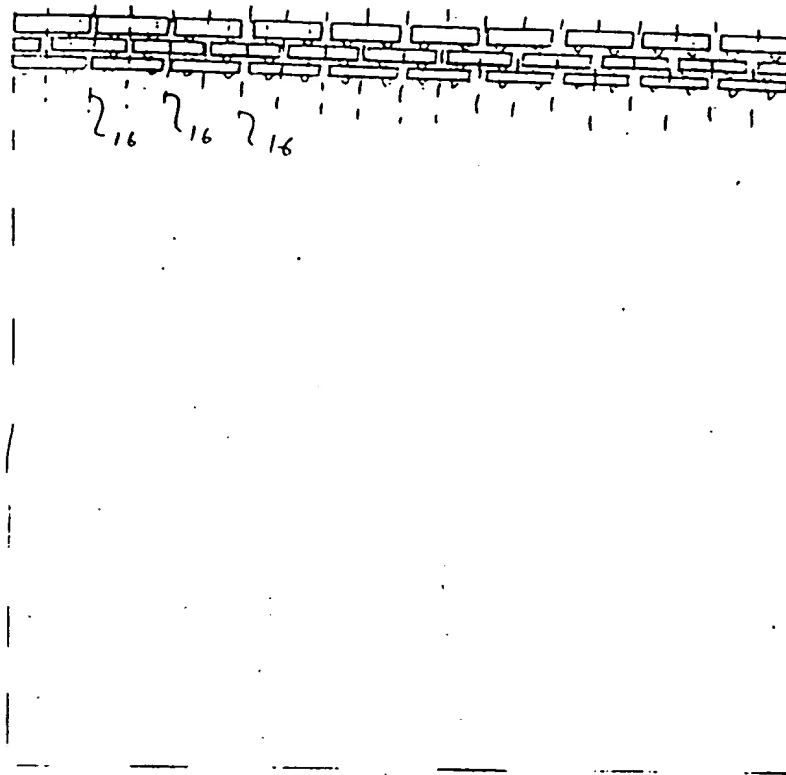


Fig 3

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